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Multifractal analysis of divergence and convergence of wavelets series

We study the convergence and divergence of the wavelet expansion of a function in a Sobolev or a Besov space from a multifractal point of view. In particular, we give an upper bound for the dimension of the set of points where the expansion converges (or diverges) at a given speed, and we show that, generically, these bounds are optimal.